

## EAST SEARCH

5/14/04

L#	Hits	Search String	Databases
L1	19698	buffer\$ near10 (logic or network\$)	USPAT; EPO; JPO
L1	6500	vibrat\$6 and test\$5 and calibrat\$5 and (simulat\$5 or model\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
L2	451	1 and (703/\$.ccls. or 702/\$.ccls.)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
L3	1	6006164.PN.	USPAT
L4	186	1 and (vibrat\$6 same test\$5 same calibrat\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
L5	269	earthquake near5 (simulat\$5 or model\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB
L6	1	5422824.PN.	USPAT
L7	1	4885707.PN.	USPAT
<b>Results of search set L4:</b>			
US RE34663 E		Non-invasive determination of mechanical characteristics in the body	600/587
US 6718615 B2		Method of forming a coriolis flowmeter	29/592.1
US 6691573 B2		Portable vehicle testing environment	73/571
US 6684663 B2		Microinscribed gemstone	63/32
US 6679121 B2		Blade vibration test apparatus and method	73/660
US 6675653 B2		Method and system for detecting drive train vibrations	73/650
US 6674532 B2		Interferometric polarization interrogating filter assembly and method	356/491
US 6672168 B2		Multi-level machine vibration tester marker pen	73/660
US 6668650 B1		Vibration testing apparatus and method using acoustical waves	73/571
US 6668635 B2		Method of improving steering performance robustness utilizing dimensional non-uniformity in tire/wheel	73/146
US 6665633 B2		Relation of rotational vibration stimuli to performance of a hard disc drive	702/182
US 6649277 B1		Structure for and method of making magnetic recording media	428/611
US 6627006 B1		Method of controlling a treatment line	148/241
US 6624894 B2		Scanning interferometry with reference signal	356/511
US 6623698 B2		Saliva-monitoring biosensor electrical toothbrush	422/68.1
US 6606902 B2		Method of improving steering performance robustness utilizing stiffness non-uniformity in tire/wheel	73/146
US 6598455 B1		Non-inertial calibration of vibratory gyroscopes	73/1.77
US 6564637 B1		Sensor having a resonance structure, especially an acceleration or rotation rate sensor, and a device for carrying out a self-test	73/504.12
US 6559655 B1		System and method for analyzing agricultural products on harvesting equipment	324/634
US 6541957 B1		Method and apparatus for detecting motor shaft coupling features	324/166
US 6531321 B1		Blood control and system for erythrocyte sedimentation measurement	436/70
US 6516863 B2		Foundry sand	164/5
US 6516651 B1		Coriolis effect transducer	73/1.16
US 6510745 B2		Coriolis effect transducer	73/861.356

US 6498996 B1	Vibration compensation for sensors	20021224	702/104
US 6492957 B2	Close-proximity radiation detection device for determining radiation shielding device effectiveness and a method therefor	20021210	343/841
US 6485962 B1	Methods for signal enhancement in optical microorganism sensors	20021126	435/288.7
US 6484580 B2	In situ testing of a satellite or other object prior to development	20021126	73/571
US 6476351 B1	Laser marking system	20021105	219/121.69
US 6443736 B1	Technology explorer model	20020903	434/300
US 6435262 B1	Foundry sand	20020820	164/412
US 6416916 B1	Toner and developer for magnetic brush development system	20020709	430/108.3
US 6412354 B1	Vibrational forced mode fluid property monitor and method	20020702	73/861.356
US 6395482 B1	Method of determining susceptibility to schizophrenia	20020528	435/6
US 6388949 B1	Marine turtle acoustic repellent/alerting apparatus and method	20020514	367/139
US 6328647 B1	Pressure differential detecting system, and method of use	20011211	454/255
US 6304406 B1	Rotational vibration compensation using a fixed head and a constant frequency pattern	20011016	360/73.03
US 6289734 B1	In-situ non-destructive audiosonic identification system for visco-elastic materials	20010918	73/573
US 6285522 B1	Rotational vibration compensation using a dedicated surface with a constant frequency pattern	20010904	360/77.05
US 6222336 B1	Rotational vibration detection using spindle motor velocity sense coils	20010424	318/448
US 6211484 B1	Laser marking system and certificate for a gemstone	20010403	219/121.68
US 6205871 B1	Vascular phantoms	20010327	73/866.4
US 6196047 B1	Method and system to measure torque per unit current as a function of angle in hard disk drive actuators	20010306	73/1.11
US 6183882 B1	In plane deflection coupon for monitoring and controlling of laser shock peening	20010206	428/614
US 6138493 A	Kinematic error test calibration	20001031	73/1.01
US 6120466 A	System and method for quantitative measurements of energy damping capacity	20000919	600/590
US 6114965 A	System for monitoring the dynamic tooling/shutheight deflection activity within a press machine	20000905	340/680
US 6094047 A	Method and apparatus for balancing rotating components of a spindstand of a magnetic head and disk tester	20000725	324/262
US 6075593 A	Method for monitoring and controlling laser shock peening using temporal light spectrum analysis	20000613	356/318
US 6071863 A	Biodegradable polyalphaolefin fluids and formulations containing the fluids	20000606	508/591
US 6052056 A	Substance detection system and method	20000418	340/583
US 6031486 A	Method and apparatus for integration and testing of satellites	20000229	342/165
US 5951790 A	Method of monitoring and controlling laser shock peening using an in plane deflection test coupon	19990914	148/510
US 5932119 A	Laser marking system	19990803	219/121.68
US 5928160 A	Home hearing test system and method	19990727	600/559
US 5895858 A	Integrated accelerometer test system	19990420	73/1.38
US 5844675 A	Interchangeable sample stage with integral reference surface for magnetic-head suspension measuring instrument	19981201	356/139.03
US 5804697 A	Remote control structural exciter	19980908	73/1.82

US 5803983 A	Method for removing solid particulate material from within liquid fuel injector assemblies	19980908	134/22.12
US 5771298 A	Apparatus and method for simulating a human mastoid	19980623	381/60
US 5764518 A	Self reproducing fundamental fabricating machine system	19980609	700/95
US 5761090 A	Expert system for testing industrial processes and determining sensor status	19980602	714/26
US 5734596 A	Self-calibrating and remote programmable signal conditioning amplifier system and method	19980331	702/107
US 5675505 A	Sine on random data analysis method for simulating engine vibration	19971007	702/113
US 5642298 A	Wafer testing and self-calibration system	19970624	702/117
US 5624377 A	Apparatus and method for simulating a human mastoid	19970429	600/25
US 5610339 A	Method for collecting machine vibration data	19970311	73/660
US 5602757 A	Vibration monitoring system	19970211	702/56
US 5582998 A	Monoclonal antibodies against human TNF-binding protein I (TNF-BP I) and immunoassays therefor	19961210	435/7.1
US 5576984 A	Hydrodynamic bearing rotor orbit simulator	19961119	703/7
US 5535615 A	Absorption tester for measuring the wicking characteristics of a paperboard web	19960716	73/38
US 5517575 A	Methods of correcting optically generated errors in an electro-optical gauging system	19960514	382/108
US 5517426 A	Apparatus and method for adaptive closed loop control of shock testing system	19960514	702/109
US 5463464 A	Electro-optical system for gauging surface profile deviations using infrared radiation	19951031	356/601
US 5416589 A	Electric field measuring system	19950516	356/601
US 5315232 A	Vibration isolation system	19940524	324/72
US 5310157 A	Denuder for gas sampling	19940510	248/619
US 5302191 A	Control system for multiple input scales	19940412	95/285
US 5296655 A	Active resistor trimming of accelerometer circuit	19940322	177/199
US 5295387 A	Vibration test fixture	19940111	73/1.38
US 5277066 A	Apparatus and process for measuring mechanical properties of fibers	19931214	73/663
US 5269181 A	Calibration system	19931012	73/160
US 5251469 A	Fluidized catalytic cracking process employing shell-coated FCC catalysts	19930720	73/1.86
US 5228980 A			208/120.15
US 5207107 A	Non-intrusive flow meter for the liquid based on solid, liquid or gas borne sound	19930504	73/861.04
US 5189929 A	System and method for transmission gearbox noise control utilizing localized oil cooling/heating	19930302	74/606A
US 5153393 A	Crash sensor for a passive motor vehicle occupant restraint system	19921006	200/61.45R
US 5152401 A	Agricultural commodity condition measurement	19921006	209/556
US 5129724 A	Apparatus and method for simultaneous measurement of film thickness and surface height variation for film-substrate sample	19920714	356/503
US 5111704 A	Apparatus and method for simulating blade pass sensor signals	19920512	73/866.4
US 5111704 A	Blade pass sensor signal simulating appts. - has processor providing series of discrete values, D=A converters, analog signal filter, clock circuitry and synchroniser		
US 5111704 A	Ultrasonic liquid level monitoring system	19920512	
US 4984449 A	Computerized control system and method for balancers	19910115	73/49.2
US 4977510 A		19901211	701/124

US 4975573 A	Optical test bench	19901204	250/252.1
US 4965513 A	Motor current signature analysis method for diagnosing motor operated devices	19901023	324/772
US 4963826 A	Reference standard block for use in nondestructive test probe calibration and method of manufacture thereof	19901016	324/202
US 4932788 A	Monitoring of the quality of a flowing vapor	19900612	374/35
US 4909064 A	Impulse calibration of mechanical to electrical transducers	19900320	73/1.82
US 4903788 A	Vibrating tray scale with conveying mechanism	19900227	177/210FP
US 4856604 A	Apparatus and method of determining the authenticity of weight obtained from a vibrating tray scale	19890815	177/210FP
US 4856602 A	Apparatus and method of weighing articles based upon harmonic motion	19890815	177/210FP
US 4842776 A	Styrylaryloxy ether sulfonates, a process for their preparation and their use in the recovery of crude oil	19890627	562/42
US 4834111 A	Heterodyne interferometer	19890530	600/587
US 4825647 A	Performance improvements in thruster assembly	19890502	60/203.1
US 4824240 A	Internal laser interferometer	19890425	356/4.1
US 4815004 A	Apparatus and method for predicting fore/aft forces generated by tires	19890321	702/41
US 4801365 A	Method for enriching a middle isotope using vibration-vibration pumping	19890131	204/157.22
US 4799378 A	Piezoelectric viscometer	19890124	73/54.27
US 4785797 A	Method and apparatus for therapeutic motion and sound treatment of infants	19881122	601/60
US 4782446 A	Vibrator quality control method and system	19881101	702/14
US 4778018 A	Apparatus and method of determining the mass of an article by measuring the shift in the period of harmonic motion	19881018	177/210FP
US 4774064 A	Conversion of calcium compounds into solid and gaseous compounds	19880927	423/168
US 4771792 A	Non-invasive determination of mechanical characteristics in the body	19880920	600/587
US 4753110 A	Dynamometers	19880628	73/146
US 4730449 A	Radiation transfer thrusters for low thrust applications	19880315	60/203.1
US 4646754 A	Non-invasive determination of mechanical characteristics in the body	19870303	600/587
US 4612800 A	Slurry viscometer	19860923	73/54.01
US 4535411 A	Field balancing apparatus	19850813	700/279
US 4492465 A	Retro-reflective electro-optical angle measuring system	19850108	356/139.03
US 4480480 A	System for assessing the integrity of structural systems	19841106	73/769
US 4479386 A	Insulation bonding test system	19841030	73/582
US 4447699 A	Closed loop control of continuous seam resistance heated forge welding cylinders	19840508	219/110
US 4445378 A	Acoustic ground impedance meter	19840501	73/589
US 4443103 A	Retro-reflective electro-optical angle measuring system	19840417	356/139.03
US 4422226 A	Process for producing crystal resonators	19831227	29/25.35
US 4408285 A	Vibration analyzing apparatus and method	19831004	702/56
US 4377343 A	Dual-beam skin friction interferometer	19830322	356/503
US 4376884 A	Closed loop control of continuous seam resistance heated forge welding cylinders	19830315	219/109
US 4376883 A	Monitoring weld quality via forging assembly dynamics	19830315	219/109
US 4371078 A	Pallet, process and apparatus for producing crystal resonators	19830201	206/716
US 4369653 A	Shrinkage gauge and method	19830125	73/150R
US 4366715 A	Pressure testing apparatus	19830104	73/714
US 4364837 A	Shampoo compositions comprising saccharides	19821221	510/121

US 4335276 A	Apparatus for non-invasive measurement and display nasalization in human speech	19820615	704/276
US 4251767 A	Dual channel capacitance measurement device	19810217	324/676
US 4203724 A	Method and apparatus for the measurement of antigens and antibodies	19800520	436/519
US 4128011 A	Investigation of the soundness of structures	19781205	73/579
US 4064735 A	Excitation and spectral calibration of acoustic emission systems	19771227	73/1.82
US 4047967 A	Concrete composition	19770913	524/4
US 3974689 A	System for detecting faults along an electric overhead traveling crane runway	19760817	73/146
US 3960004 A	Method for measuring impedance	19760601	73/589
US 3948248 A	Method of measuring ocular pulse	19760406	600/457
US 3922572 A	Electroacoustical transducer	19751125	310/334
US 3834221 A	TEST STAND FOR VEHICLE ENGINES	19740910	73/116
US 3830091 A	ACCELEROMETER COMPARATOR	19740820	73/1.38
US 3823368 A	CALIBRATION AND BALANCE SYSTEM IN PULSE EDDY CURRENT TESTING APPARATUS	19740709	324/233
US 3817096 A	BALLISTIC RANGE DUST EROSION APPARATUS	19740618	73/167
US 3785203 A	WAVE FORCE TRANSDUCER	19740115	73/170.31
US 3705516 A	METHOD AND APPARATUS FOR TESTING THE CONDITION OF A MACHINE	19721212	73/659
US 3691991 A	APPARATUS FOR SPRAY-COATING COMPONENTS	19720919	118/629
US 3681967 A	BALANCING MACHINE AND METHOD FOR CALIBRATING THE SAME	19720808	73/1.14
US 3675495 A	WHEEL BALANCING APPARATUS	19720711	73/466
US 3643498 A	APPARATUS FOR TESTING SOILS IN SITU	19720222	73/811
US 3590626 A	SINUSOIDAL PRESSURE CALIBRATOR	19710706	73/1.67
US 20040025972 A1	Method of controlling a treatment line	20040212	148/241
US 20030233053 A1	Pain assessment	20031218	600/553
US 20030221487 A1	PORTABLE VEHICLE TESTING ENVIRONMENT	20031204	73/462
US 20030162091 A1	Battery pack	20030828	429/156
US 20030126812 A1	Casement window	20030710	52/204.62
US 20030083839 A1	RF fixture electronics for testing RF devices	20030501	702/117
US 20030082825 A1	Apparatus for rapid measurement of aerosol bulk chemical composition	20030501	436/148
US 20030078308 A1	Ion-exchange materials with improved ion conductivity	20030424	521/27
US 20030056593 A1	Multi-level machine vibration tester marker pen	20030327	73/649
US 20030043046 A1	Vibration sensing satellite call-out unit	20030306	340/683
US 20030033883 A1	Method and system for detecting drive train vibrations	20030220	73/649
US 20030019852 A1	Laser marking system	20030130	219/121.68
US 20030010105 A1	Method of improving steering performance robustness utilizing dimensional non-uniformity in tire/wheel	20030116	73/146
US 20030005757 A1	Method of improving steering performance robustness utilizing stiffness non-uniformity in tire/wheel	20030109	73/146
US 20020196450 A1	Scanning interferometry with reference signal	20021226	356/511
US 20020193581 A1	Methods of determining susceptibility to or presence of schizophrenia, or a disorder related thereto	20021219	536/23.1
US 20020189778 A1	Foundry sand	20021219	164/1
US 20020183942 A1	Modal analysis method and apparatus therefor	20021205	702/56
US 20020169386 A1	Real-time biological-chemical-physical sensitivity and irritation onset neuro sensory (BIOCATIONS) biofeedback monitor	20021114	600/544

US 20020127143 A1	Saliva-monitoring biosensor electrical toothbrush	20020912	422/68.1
US 20020123860 A1	Relation of rotational vibration stimuli to performance of a hard disc drive	20020905	702/182
US 20020083772 A1	Blade vibration test apparatus and method	20020704	73/660
US 20020083757 A1	Coriolis effect transducer	20020704	73/1.37
US 20020075189 A1	Close-proximity radiation detection device for determining radiation shielding device effectiveness and a method therefor	20020620	343/702
US 20020016535 A1	Subcutaneous glucose measurement device	20020207	600/319
US 20020014125 A1	Apparatus for connecting a coriolis flowmeter flow tube to a flowmeter case	20020207	73/861.357
US 20010047137 A1	Methods and apparatus for in vivo identification and characterization of vulnerable atherosclerotic plaques	20011129	600/475
US 20010032510 A1	In situ testing of a satellite or other object prior to deployment	20011025	73/571
SU 450982 A	Regulating valves test stand - has resilient viallave mounting simulating vibrating operational conditions	19741215	
SU 1374060 A	Meter of vibration amplitude of objects - has light splitter to split laser beam into measuring and reference channels	19880215	
SU 1018075 A	Acoustic well logging equipment test device - has converters placed in hermetic converters, movable along tube surface	19830515	
NN7108850	Ultrasonic Pressure and Frequency Analyzer. August 1971.	19710801	

#### Results of search set L5:

WO 9916049 A1	INTERACTIVE SOUND EFFECTS SYSTEM AND METHOD OF PRODUCING MODEL-BASED SOUND EFFECTS	19990401	
WO 9417384 A1	IMPROVEMENTS IN OR RELATING TO TESTING APPARATUS AND METHODS	19940804	
US RE36282 E	System for using geopressed-geothermal reservoirs	19990831	60/641.2
US RE30278 E	Special effects generation and control system for motion pictures	19800520	352/5
US 6734334 B2	Processes for immobilizing radioactive and hazardous wastes	20040511	588/2
US 6728670 B2	Method of determining the topology of a network by transmitting and monitoring sequences of orthogonal signals	20040427	704/224
US 6728640 B2	Method of short term forecasting of moderate size earthquakes	20040427	702/15
US 6725612 B2	Directional rolling pendulum seismic isolation systems and roller assembly therefor	20040427	52/167.5
US 6721684 B1	Method of manufacturing and analyzing a composite building	20040413	702/183
US 6697770 B1	Computer process for prescribing second-order tetrahedral elements during deformation simulation in the design analysis of structures	20040224	703/2
US 6694815 B2	Liquefaction phenomenon prediction system	20040224	73/584
US 6631593 B2	Directional sliding pendulum seismic isolation systems and articulated sliding assemblies therefor	20031014	52/167.9
US 6631343 B1	Method for reducing the calculation time of a numerical calculation for a computer implemented superposition model	20031007	703/2
US 6629042 B2	Testing system and testing method for structure	20030930	702/42
US 6598359 B1	Earthquake-immune curtain wall system	20030729	52/167.3
US 6547624 B1	System for recording and editing films	20030415	446/85
US 6424929 B1	Method for detecting outlier measures of activity	20020723	702/179
US 6411997 B1	Method of determining the topology of a network of objects	20020625	709/224

US 6405797 B2	Enhancement of flow rates through porous media	20020618	166/249
US 6397168 B1	Seismic evaluation method for underground structures	20020528	703/2
US 6397153 B1	Testing system and testing method for structure	20020528	702/42
US 6389361 B1	Method for 4D permeability analysis of geologic fluid reservoirs	20020514	702/15
US 6373396 B2	Method for predicting seismic events	20020416	340/690
US 6341258 B1	Shaking test apparatus and method for structures	20020122	702/56
US 6340143 B1	Fastening apparatus	20020122	248/154
US 6336296 B1	System floor and construction method thereof	20020108	52/220.2
US 6269733 B1	Force servo actuator with asymmetric nonlinear differential hydraulic force feedback	20010807	91/415
US 6269733 B	Hydraulic force servo control system for compensating for unequal loading forces applied to an actuator piston e.g. used to test noise, vibration and harshness of vehicle, by using asymmetric nonlinear hydraulic force feedback	20010807	
US 6263293 B1	Earthquake simulating shaking system	20010717	702/113
US 6263293 B	Earthquake simulating system for partial construction system, has multiple separated movement producing devices each including mounting surface connected with multiple actuators	20010717	
US 6241019 B1	Enhancement of flow rates through porous media	20010605	166/249
US 6240068 B1	Method for automatically aggregating objects	20010529	370/252
US 6237303 B1	Steel frame stress reduction connection	20010529	52/729.1
US 6170202 B1	Building system using shape memory alloy members	20010109	52/167.1
US 6145796 A	Fastening apparatus	20001114	248/154
US 6115972 A	Structure stabilization system	20000912	52/167.4
US 6109486 A	Dry sand pluviation device	20000829	222/485
US 6108986 A	Earthquake-resistant load-bearing system	20000829	52/167.6
US 6101840 A	Air separation plants	20000815	62/643
US 6088739 A	Method and system for dynamic object clustering	20000711	719/315
US 6073493 A	Method of diagnosing fatigue life of structural steelwork and a member of steelwork having life diagnostic function	20000613	73/801
US 6050538 A	Restraint system and method for protecting barrels in a barrel stack against earthquake damage	20000418	248/505
US 6046988 A	Method of determining the topology of a network of objects	20000404	370/254
US 6044210 A	Computer process for prescribing second-order tetrahedral elements during deformation simulation in the design analysis of structures	20000328	716/9
US 6029414 A	Seismic fixture clamp	20000229	52/506.07
US 6019006 A	Centrifuges and associated apparatus and method	20000201	73/865.6
US 5996417 A	Preload piston actuator	19991207	73/662
US 5975315 A	Equipment rack	19991102	211/26
US 5960376 A	Moving object controller containing a differential of acceleration measurer	19990928	702/141
US 5945976 A	Graphic data processing system	19990831	345/419
US 5941029 A	Seismic fixture clamp	19990824	52/167.1
US 5927019 A	Earthquake-resistant door structure and an earthquake-resistant device	19990727	49/501
US 5926462 A	Method of determining topology of a network of objects which compares the similarity of the traffic sequences/volumes of a pair of devices	19990720	370/254
US 5865624 A	Reactive ride simulator apparatus and method	19990202	434/66
US 5842312 A	Hysteretic damping apparatus and methods	19981201	52/167.1

US 5842148 A	Method of evaluating and classifying living structures for estimating potential damage thereto from physical disturbances	19981124	702/34
US 5783945 A	Earthquake forecast method and apparatus with measurement of electrical, temperature and humidity parameters of soil	19980721	324/348
US 5742278 A	Force feedback joystick with digital signal processor controlled by host processor	19980421	345/156
US 5726886 A	Moving object controller containing a differential of acceleration measurer	19980310	701/93
US 5724893 A	Servo-type shaking table assembly	19980310	108/20
US 5724893 A	Shaking table assembly for vibration testing of e.g. car and electronic parts, and in earthquake simulation on building - is of servo type, with testing table slidably mounted on one set of perpendicularly arranged linear guides	19980310	527/29.1
US 5680738 A	Steel frame stress reduction connection	19971028	
US 5675088 A	Method and apparatus for automatic monitoring of tectonic stresses and quantitative forecast of shallow earthquakes	19971007	73784
US 5634876 A	Centrifuges and associated apparatus and methods	19970603	494/67
US 5618070 A	Push button quake latch	19970408	292/228
US 5612943 A	System for carrying transparent digital data within an audio signal	19970318	369/124.09
US 5602759 A	Motor vehicle vibrating system	19970211	702/56
US 5602564 A	Graphic data processing system	19970211	345/782
US 5601433 A	Earthquake toy, educational device or the like	19970211	434/130
US 5601433 A	Educational device or toy for simulating effects of earthquakes - comprises flywheel disposed in slot formed in table and connected to output shaft of motor	19970211	
US 5583844 A	Programming device and method for controlling ride vehicles in an amusement attraction	19961210	701/1
US 5572440 A	Motor vehicle vibrating system and method of controlling same	19961105	700/280
US 5560161 A	Actively tuned liquid damper	19961001	52/167.2
US 5556340 A	Amusement ride assembly with rotating tube synchronized with an image	19960917	472/59
US 5545040 A	Multi-tier jack motion system	19960813	434/58
US 5524978 A	Slider quake latch	19960611	312/216
US 5457370 A	Motion control system for cinematography	19951010	318/571
US 5403238 A	Amusement park attraction	19950404	472/43
US 5392580 A	Modular reinforcement cages for ductile concrete frame members and method of fabricating and erecting the same	19950228	52/660
US 5388056 A	Method and system for vibration test	19950207	702/56
US 5388056 A	Vibration test system e.g. for large building with high precision operation - tests partial structural response w.r.t. applied excitation signal, and analyses numerical model for larger structure using test results	19950207	
US 5388056 A	Two tier frame	19940719	211/189
US 5330066 A	Construction having a damping device	19931109	52/167.1
US 5259159 A	System for using geopressured-geothermal reservoirs	19921124	60/641.2
US 5165235 A	Angular displacement measuring device	19920811	356/139.03
US 5137353 A	Earthquake simulator for a theme park	19910423	472/59
US 5009412 A			
US 4980118 A	Nuclear power generating station equipment qualification method and apparatus	19901225	376/247
US 4899892 A	Earthquake-resistant electronic equipment frame	19900213	211/26
US 4887788 A	Base isolation pad	19891219	248/562



US 4884030 A	Method and system for acquisition and separation of the effects of electromagnetic fields to predict earthquakes	19891128	324/344
US 4876058 A	Nuclear power generating station equipment qualification method and apparatus	19891024	376/247
US 4690206 A	Nuclear steam generator wrapper barrel/tube support plate connection assembly and radial tuning method for assembling same	19870901	165/81
US 4679591 A	Servovalve drive electronics improvements	19870714	137/624.13
US 4679591 A	Servovalve drive with high frequency resonance compensation - has final input signal fed into drive system using two amplifiers connected as current pumps to drive current pumps	19870714	
US 4644714 A	Earthquake protective column support	19870224	52/167.4
US 4602555 A	Preloaded table coupling	19860729	92/61
US 4537077 A	Load dynamics compensation circuit for servohydraulic control systems	19850827	73/665
US 4537077 A	Load compensation circuit for servo-hydraulic control system - has actuator force determined from differential pressure times piston area with specimen force calculated in accordance with table mass	19850815	
US 4537077 A	Apparatus for and method of random vibration control	19850827	73/662
US 4516206 A	Post-processing of seismic parameter data based on valid seismic event determination	19850507	702/18
US 4513402 A	Earthquake simulator	19850423	367/73
US 4429496 A	Method and apparatus for active control of flexible structures	19840207	52/1
US 4394017 A	Earthquake game	19830719	273/237
US 4394017 A	Game which simulates disasters and excitement of earthquake - has board with building structures on squares representing cities which are tilted and vibrated by motorised mechanism	19830719	
US 4385524 A	Compact shake mechanism	19830531	73/663
US 4343475 A	Earthquake game device	19820810	273/276
US 4343475 A	Earthquake simulating toy building game - has metal balls running along rutted board to vibrate toy building	19820810	
US 4330103 A	Earthquake protector	19820518	248/548
US 4278102 A	Disaster activated shut-off valve	19810714	137/39
US 4226677 A	Earthquake-proof foundation structure for horizontal type coke oven battery	19801007	202/138
US 4193570 A	Active nutation controller	19800318	244/165
US 4164152 A	Biaxial vibration-testing installation	19790814	73/665
US 4147358 A	Vibrating game apparatus with loosely interfitting surface elements	19790403	273/241
US 4112776 A	Earthquake simulator	19780912	73/665
US 4112776 A	Booth earthquake simulator - has frame for hydraulically operated platform reciprocated through lever system	19780912	
US 4056892 A	Engineering and educational table and method of use	19771108	434/151
US 4040220 A	Concrete joints	19770809	52/259
US 4026383 A	Gyroscopic vibrator	19770531	181/121
US 4020672 A	Mechanical force pulse generator for use in structural analysis	19770503	73/12.04
US 3990039 A	Tuned ground motion detector utilizing principles of mechanical resonance	19761102	367/179
US 3973839 A	Special effects generation and control system for motion pictures	19760810	352/5
US 20040093103 A1	Functional object data, functional object imaging system, and object data transmitting unit, object data receiving unit and managing unit for use in the functional object imaging system	20040513	700/96

US 20040074723 A1	Detachable and replaceable shock damper for use in structures	20040422	188/371
US 20040069725 A1	Seismically resistant network equipment rack	20040415	211/26
US 20040045236 A1	Directional sliding pendulum seismic isolation systems and articulated sliding assemblies therefor	20040311	52/274
US 20040040232 A1	Damage resistant glass panel	20040304	52/204.5
US 20040021953 A1	Zoom lens system	20040205	359/691
US 20040016185 A1	Earthquake-immune curtain wall system	20040129	52/167.3
US 20030208985 A1	Steel frame stress reduction connection	20031113	52/653.1
US 20030200706 A1	Exoskeleton system for reinforcing tall buildings	20031030	52/167.3
US 20030182065 A1	Method of short term forecasting of moderate size earthquakes	20030925	702/15
US 20030177834 A1	Liquefaction phenomenon prediction system	20030925	73/649
US 20030167728 A1	Advanced processes for coring and grouting masonry	20030911	52/742.16
US 20030144568 A1	Seismic cask stabilization device	20030731	588/1
US 20030055582 A	Vibration testing device for evaluating earthquake characteristics, has numerical simulation blocks, vibration calculating, and waveform generating block	20040406	
US 20030051032 A1	Generating time function of deformation applied to test piece	20030313	709/224
US 20030047854 A1	Method of determining the topology of a network of objects	20030313	267/136
US 20030012084 A1	Detachable and replaceable shock damper for use in structures	20030116	367/178
US 20020195246 A1	Seismic wave measuring devices	20021226	166/249
US 20020166301 A1	Enhancement of flow rates through porous media		
US 20020166296 A1	Directional sliding pendulum seismic isolation systems and articulated sliding assemblies therefor	20021114	52/274
US 20020143935 A1	Directional rolling pendulum seismic isolation systems and roller assembly therefor	20021114	52/167.5
US 20020116493 A1	Method of determining the topology of a network of objects	20021003	709/224
US 20020116136 A1	Method of determining the topology of a network of objects	20020822	709/224
US 20020095275 A1	Testing system and testing method for structure	20020822	702/41
US 20020059034 A1	Design analysis method of earthquake-proof reinforcement structure, and storage medium	20020718	703/1
US 20020038070 A1	Shaking test apparatus and method for structures	20020516	702/56
US 20020014043 A1	Processes for immobilizing radioactive and hazardous wastes	20020328	588/3
US 20020011936 A1	Manufacture and use of earthquake resistant construction blocks	20020207	52/167.1
US 20010029432 A1	Method for predicting seismic events	20020131	340/690
US 20010017206 A1	System and method for analyzing structures subjected to catastrophic events	20011011	702/15
SU 953482 B	Enhancement of flow rates through porous media	20010830	166/249
SU 905896 B	Earthquake simulator - with igniters producing shock waves in cylinders and accelerating pressure drop	19820825	
SU 896459 B	Simulating seismic action of earthquakes on buildings - by producing vibrations at intervals equal to natural vibration period of building to create conditions of max. danger	19820215	
SU 489980 A	Earthquake safety test for buildings - by using explosive buried charges in specified pattern fired in specified order to simulate seismic shocks	19820107	
SU 1322834 A	Testing earthquake resistance of buildings - by using a platform with simultaneous movements in three directions	19760202	
	Process of running of blasting operations	19981010	

RU 2024955 C	Modelling stand for investigating seismo-action effects of earthquakes on building models - has horizontal table to carry model of object, and uses impact mechanism in adjustable frame to apply impacts to model	19941215
JP 58026241 A	EXCITATION DEVICE FOR LONG SIZED STRUCTURE	19830216
JP 56090232 A	OSCILLATION DEVICE	19810722
JP 411326113 A	METHOD FOR TESTING PERFORMANCE OF VIBRATION-IMMUNE DEVICE	19991126
JP 411300278 A	APPARATUS FOR CONTROLLING TWIN VIBRATING TABLES	19991102
JP 411140965 A	ANALYZING METHOD OF STRUCTURE FRAME	19990525
JP 411095649 A	SIMULATION APPARATUS FOR EARTHQUAKE SIGN PHENOMENON	19990409
JP 411095648 A	DISASTER SIMULATION SYSTEM	19990409
JP 2004101785 A	Oscillation apparatus for vehicle has hydraulic cylinder whose operation can be switched so that subject on oscillating floor can experience shake during operation and non-operation of earthquake-resistance support mechanism	20040402
JP 2004101784 A	Oscillation apparatus for vehicle has lock mechanism which secures operation of earthquake-resistance mechanism so that subject on oscillating floor can experience shake during operation and non-operation of earthquake-resistance mechanism	20040402
JP 2004068863 A	Single rod-type hydraulic cylinder apparatus for e.g. flight simulator has collection channel which is provided between hydraulic chambers and hydrostatic bearing pockets to recover oil flowed out from hydrostatic bearing pockets	20040304
JP 2004028929 A	REAL TIME COMPUTING DEVICE FOR EARTHQUAKE DAMAGE	20040129
JP 2004028929 A	Building damage calculation device has digital-to-analog converter to convert earthquake data received by real-time reception installation to seismograph data	20040129
JP 2004012988 A	EARTHQUAKE PREPAREDNESS TRAINING SIMULATION SYSTEM	20040115
JP 2004012988 A	Earthquake training simulation system produces simulation data table showing amount of supply of gas/water at time of earthquake and flood	20040115
JP 2003297212 A	FASTENING FIXTURE FOR SAFETY AMPERE BREAKER COPING WITH EARTHQUAKE	20031017
JP 2003296396 A	EXPECTED LIFE CYCLE COST EVALUATION SYSTEM OF BUILDING AND RECORDING MEDIUM IN WHICH EXPECTED LIFE CYCLE COST EVALUATION PROGRAM IS RECORDED	20031017
JP 2003296396 A	Life cycle cost evaluation system for building, calculates risk based on expected damage cost of building and earthquake occurrence probability to determine expected life cycle cost of building	20031017
JP 2003281459 A	METHOD AND SYSTEM FOR SIMULATION OF TRAINING FOR EARTHQUAKE EMERGENCY	20031003
JP 2003281459 A	Earthquake training simulation system has tables with standard pressure supply values and pressure change supply values corresponding to simulation regions of pipe before and after occurrence of earthquake, respectively	20031003
JP 2003280512 A	Oscillation apparatus for vehicle has three link mechanisms, which support oscillation stand with respect to yawing frame and actuated by hydraulic cylinder to reciprocally move oscillation stand to three axial directions	20031002

JP 2003262571 A	METHOD OF MEASURING LIQUEFACTION OF GROUND BY POTENTIAL OBSERVATION	20030919
JP 2003239221 A	BEARING DEVICE AND SLIDE BEARING DEVICE	20030827
JP 2003222566 A	STRUCTURAL DAMAGE ESTIMATION SYSTEM AND PROGRAM	20030808
	Piping apparatus of nuclear power plant, calculates vibration response of piping unit analytical model with respect to seismic load, based on which damping ratio and elasticity limit of piping material are setup	20030509
JP 2003132107 A	Huge stroke vibration excitation apparatus for earthquake simulation, has pulley attached to piston of vibrator, so that piston stroke is doubled and transmitted to shake table connected to pulley through wire	20030916
JP 2003130755 A	Earthquake resistance simulator has connection selector that couples second movable stand on which person is to ride, to first movable stand in shiftable manner	20030418
JP 2003114604 A	Virtual reality space provision apparatus for amusement facilities, synchronizes audio equipment, projector and vibrator which are input with respective control signals generated based on selected environmental condition	20030305
JP 2003066825 A	BUSINESS OF SYSTEM IMPLEMENTATION TO PROVIDE EXPERIENCE SERVICE OF QUAKE OF HOUSE WITH VERY SEVERE EARTHQUAKE PREVENTIVE FUNCTION STANDING ON SITE EMBEDDED WITH ARTIFICIAL EARTHQUAKE GENERATOR	20030124
JP 2003022001 A	Earthquake resistance device has elastic material which provides resiliency to movement of device support leg from horizontal plane and perpendicularly	20020308
JP 2002070945 A	directional fixed position Test equipment for measuring earthquake resistance of subterranean structure, has jack which applies initial stress equivalent to soil pressure to the subterranean model	20011116
JP 2001318024 A	Earthquake simulation three-dimensional shake table for indoor installation, has top plate which is moved three-dimensionally in parallel to the base, to produce composite vibrations	20011102
JP 2001305948 A	Bearing structure for multistory building in earthquake prone region, has fluid filled in space formed between internal side surfaces of laminated structure, upper rigid piece and bottom rigid piece	20011031
JP 2001304334 A	Adjustable room arrangement type architectural model used as e.g. ceiling model, has each main beam flanked on both sides by sub beams and served as joist	20010914
JP 2001248229 A	Disaster rescue training apparatus for use during e.g. earthquake, has simulation effect installation to change weather condition of base and training deck provided to base selectively based on type of disaster	20010518
JP 2001134168 A	EARTHQUAKE MOTION SIMULATING METHOD	20010420
JP 2001108573 A	Simulation earthquake motion production method for building design, involves adjusting speed of base wave corresponding to maximum speed range of surface wave	20010420
JP 2001108573 A	Triaxial direction vibration tester for earthquake-proof structures, has vertical axis excitation device coupled to multiple vertical rectilinear motion bearings under oscillating table through intermediate table	20030603

JP 2001091398 A	Reliability characteristic test for earthquake resistance unit, involves attaching molding units simulating peripheral structure, on upper and lower sides of earthquake resistance unit of examination structure	20010406
JP 2001074591 A	Shearing soil tub for centrifugal oscillation model for simulating behavior pattern of ground during earthquake, has earth tank for receiving earth and sand composed of base and multilayered frames	20010323
JP 2001066983 A	Operation condition exhibition model for earthquake resistant locking device, has transparent sidewall provided on two sides of case to enable viewing of operating condition of locking device	20021105
JP 2000313508 A	BUILDING TYPE RACK	20001114
JP 2000310581 A	METHOD FOR ANALYZING EARTHQUAKE RESPONSE OF BUILDING TYPE RACK	20001107
JP 2000310058 A	Antiseismic system for large buildings, has earthquake resistance apparatus and passive antiseismic apparatus which are respectively installed at base and top of building	20001107
JP 2000302348 A	Simulative operation maintenance system for lift, has controller which judges quality of test operation of drive unit during simulative disaster conditions and accordingly judgment signal is output	20001031
JP 2000259073 A	Earthquake simulating apparatus for installation to motor vehicle, has Y-direction frame arranged at central side of X-direction frame	20000922
JP 2000120781 A	Earthquake resistant structure in bridge, has multilayer lamination of hard board and soft board, which are provided in-between upper and lower stationary plates which are supported by a support mechanism	20000425
JP 2000075040 A	Earthquake damage countermeasure assistance apparatus for disaster prevention system, preserves damage estimation result in objective area and outputs estimation result in response to focus information	20000314
JP 11315645 A	Controller of earthquake resistance apparatus in building - has fixed maintenance and releasing mechanism to operate fixing unit for fixation and release of insulated support mechanism	19991116
JP 11272647 A	Disaster experience simulator for determining earthquake, fire, etc - includes calculating coordinate data of character based on action characteristic of individual person who decides disaster depending on virtual space model and coordinate data of initial character	19991008
JP 11249542 A	EARTHQUAKE DISASTER SIMULATION EXPERIENCE DEVICE	19990917
JP 11211553 A	Earthquake disaster situation simulation for evaluating level of disaster prevention consciousness of trainee - consists of databases storing previous earthquake video data, audio data and trainee response to particular situation, based on which earthquake situation data is correspondingly generated	19990917
JP 11211553 A	SIMPLIFIED METHOD FOR EVALUATING RESPONSE OF PIPING TO EARTHQUAKE	19990806
JP 11211553 A	Earthquake response evaluation method for pipelines used in power station etc. - involves converging calculation until rotation angle agrees with assumed rotation angle	19990806

JP 11194066 A	Multimode oscillation control method of vibration excitation stand used for study of earthquake resistant structure - involves controlling shaking table by excited vibration given by both horizontal and vertical vibration excitation actuators	19990721
JP 11183629 A	Destruction phenomenon simulation method - involves judging if computed stored energy between each block satisfies predetermined formula	19990709
JP 11161148 A	DEVICE FOR VISUALLY CHECKING VIBRATION OF BUILDING DUE TO EARTHQUAKE	19990618
JP 11161148 A	Earthquake-resisting capability testing apparatus for building - has table, on which earthquake-resistant building models are distributed, which is vibrated according to frequency similar to that of actual earthquake	19990618
JP 11160144 A	THREE-DIMENSIONAL EARTHQUAKE RESPONSE ANALYZING METHOD	19990618
JP 11160144 A	Three dimensional earthquake response analysis method of pylon - involves applying external force to 3D frame model axially using unit load, to evaluate earthquake response power of pylon	19990618
JP 11095649 A	Simulator for earthquake prediction - applies simulated area of earthquake such as terrestrial current, terrestrial magnetism to animals and studies their behavior	19990409
JP 11095648 A	Disaster simulation system for determining medical countermeasure corresponding to damage situation during e.g. earthquake - includes medical provision simulator that determines distribution in victims infirmity corresponding to received information	19990409
JP 11094161 A	Earthquake proof piping structure for high rise buildings - has L-shaped piping located in piping pit in freely movable condition with one end connected to underground buried piping and another end connected to building piping	19990409
JP 11050685 A	Earthquake-resistant multistory carpark - has steel column isolated from building pivot, such that brackets at upper edge of steel column control horizontal displacement of steel column during earthquake	19990223
JP 11044771 A	METHOD FOR FORECASTING EARTHQUAKE MOVEMENT, AND RECORDING MEDIUM RECORDED WITH PROGRAM FOR FORECASTING EARTHQUAKE MOVEMENT	19990216
JP 11044086 A	Vertical vibration suppression structure for flooring in earthquake resistant buildings - has multistage serial springs which are clamped to block and main section through pinion gear	19990216
JP 10320450 A	METHOD AND DEVICE FOR GENERATING SIMULATED EARTHQUAKE MOTION, AND RECORDING MEDIUM WHERE SIMULATED EARTHQUAKE MOTION GENERATING PROGRAM IS RECORDED	19981204
JP 10320450 A	Simulation earthquake motion production method for automatic structure design - involves inputting analysis, dislocation, fracture and simulation earthquake parameters into motion generator based on extracted specific earthquake history and active fault condition	19981204
JP 10320449 A	METHOD AND DEVICE FOR GENERATING SIMULATED EARTHQUAKE MOTION, AND RECORDING MEDIUM WHERE SIMULATED EARTHQUAKE MOTION GENERATING PROGRAM IS RECORDED	19981204
JP 10320449 A	Seismic motion simulation method - involves inputting dislocation parameter, fracture parameter and earthquake motion parameter to simulation generator based on set up active fault data	19981204

JP 10320448 A	METHOD AND DEVICE FOR GENERATING SIMULATED EARTHQUAKE MOTION, AND RECORDING MEDIUM WHERE SIMULATED EARTHQUAKE MOTION GENERATING PROGRAM IS RECORDED Simulation earthquake motion production method for automatic structure designing - involves inputting analysis and substrate simulation earthquake motion parameter to simulation earthquake motion generator based on extracted earthquake search condition	19981204
JP 10320448 A	METHOD AND DEVICE FOR SIMULATING EARTHQUAKE MOTION, AND RECORD MEDIUM WHERE EARTHQUAKE MOTION SIMULATING PROGRAM IS RECORDED Earthquake simulation method - involves simulation of earthquake, which opposes input physical properties of ground, on site designated through longitude and latitude coordinates, city name and postal code	19981204
JP 10319829 A	S-WAVE EARTHQUAKE WAVE PROBING MODEL EXPERIMENT METHOD AND DEVICE Simulation method for detecting vibration due to earthquake - involves measuring vibration of reflecting sheet using laser doppler vibration meter based on which seismic wave is detected by simulation technique	19981204
JP 10319129 A	Testing apparatus for elevator operation under simulated earthquake conditions - has timing circuit housed in case, which has selection knob on its front side and magnet for fixing to earthquake sensor on its rear side	19981117
JP 10305973 A JP 10279215 A	EARTHQUAKE ABNORMALITY DETECTOR FOR ELEVATOR METHOD FOR SHORTENING OPERATION TIME OF NUMERIC CALCULATION OF OVERLAP MODEL BY USING COMPUTER, AND PROGRAM RECORDED MEDIUM	19981020
JP 10254852 A	Simulated earthquake observation method for geological survey, exploration, active fault detector - involves calculating component existence percentage based on peak frequency and corresponding noise level of specified level, to judge noise signal	19980925
JP 10253766 A JP 10213518 A	EARTHQUAKE SIMULATION DEVICE Earthquake simulation apparatus - has acceleration sensor that measures impact exerted on carrier by drive source, such that excitation unit adds drive of each drive source as impact of different direction	19980811
JP 10213518 A	Earthquake response analysis system for simulation of non- linear behaviour of ground structure - solves non-linear oscillating equation containing mass of earth, external power resulting from internal power based on equivalent node power during earthquake to analyse reduction integral	19980410
JP 10090051 A	Earthquake sensor with automatic power supply interrupting facility used in building - has relay contact that closes operation holding circuit connected in parallel with earthquake sensing switch by actuation of relay	19971128
JP 09308088 A	Excitation machine for generating pseudo earthquake - has pair of actuators which reciprocate along one axial line from receiving stand which is positioned between left and right side-frames	19970606
JP 09146445 A	METHOD AND DEVICE FOR QUANTITATIVELY PREDICTING DIRECTLY UNDER TYPE LARGE MAGNITUDE EARTHQUAKE	19970606
JP 09145849 A	METHOD FOR EARTHQUAKE WAVE VIBRATION EXPERIMENT USING TENDON	19970516

JP 09126942 A	VIBRATION TESTOR	19970516
JP 09094128 A	DEVICE FOR SAFETY OF FURNITURE FROM OVERTURN	19970408
JP 08329043 A	SIMULATION AND PREDICTION DEVICE FOR EARTHQUAKE DAMAGE	19961213
	Simulation forecasting device for earthquake damage - has display controller which shows computed acceleration for every partition and degree of damage on mesh-like map	
JP 08329043 A	Simulation test device of weight object supporting structural member during earthquakes - has shearing load generation cylinder which generates load that is proportional to inertial force caused due to earthquake by releasing electric hydraulic servo-mechanism	19961213
JP 08313387 A	Consistent simulation system used e.g. in earthquake-proof building design, airplane design, large-scale semiconductor design - has simulator which perform simulation to predetermined model by using input data from input data producing unit	19961129
JP 08249374 A	Underground shear support serving as strong experimental model foundation during earthquake - has metal plates placed on vertical surfaces of several frames laminated on vibrating board to hold firmly frames during earthquake	19960927
JP 08201214 A	Vibration simulator for simulating e.g. earthquake vibration, typhoon-caused vibration in high-rise building - has actuator e.g. hydraulic cylinder which drives main desk to back-and-forth directions along two opposite inclined planes whose respective upper surfaces are touched by wheels of main desk	19960809
JP 08178792 A	EARTHQUAKE-RESISTANCE EXPERIMENTAL SYSTEM	19960712
JP 07055630 A	BRACE AND MULTILAYER BUILDING USING THE SAME	19950303
JP 06058004 A	OPERATION TRAINING SIMULATOR FOR POWER PLANT EQUIPPED WITH EARTHQUAKE COPYING TRAINING DEVICE	19940301
JP 05027664 A	CONTROL METHOD OF DYNAMIC VIBRATION REDUCER DEVICE FOR BUILDING	19930205
JP 04080476 A	SIGNAL WAVEFORM PATTERN DISCRIMINATING METHOD AND EARTHQUAKE DETECTING METHOD	19920313
JP 03291536 A	TRAINING DEVICE FOR OPERATOR OR THE LIKE	19911220
JP 03215887 A	METHOD FOR OBTAINING TYPICAL MODEL OF HETEROGENEOUS MEDIUM, ESPECIALLY, SUBSOIL	19910920
JP 02080994 A	Earthquake shock simulator for the study of shocks in sedimentary basins	19900322
FR 2777682 A1	Earthquake shock simulator for the study of shocks in sedimentary basins	19991022
FR 2777682 A	Seismic wave simulation apparatus for simulating earthquake phenomena occurring in foundation embedded in soil - has elastic energy accumulator shaped to induce a simulated seismic wave of known form in geological specimen such as embedded foundation of building, and hydraulic actuator used to preload accumulator in opposite direction	19991022
EP 848264 A		20031202
EP 780748 A	Controller for movable object such as automobile - derives differential of acceleration detected by sensor for use as control information for movable object	20021219
	Controller with acceleration differential sensor for e.g motor vehicle - has rear wheel steering motor and oil pressure controller arranged to generate control signal in dependence on value representing differential of acceleration derived from control unit	
EP 557034 A		20030616



EP 46116 A	Seismic wave generator - for simulating earthquakes when testing scale models of buildings e.g. nuclear power stations	19820217
EP 369548 A	Earthquake simulator for theme park - has platform moved by hydraulic cylinder arranged in triangle, having common centre of gravity	19900523
EP 169899 B	Actuator system for rigid shaker test table - has each actuator provided with static load and cyclic load rod sections	19850815
DE 29707929 U	Earthquake simulator - has computer controlled movable floor inside model of volcano which has access gangway with mounting points making it flexible.	19970821
CN 1445561 A	Method for forecasting earthquake	20031001
BR 9302867 A	Earthquake simulation vibrator driving out rats from buildings - comprises programmed transformer with central controller and site electrode NoAbstract	19950301